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**[Title]**

**Project: ReQ**

**Document: VideoStreaming**

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	<b>[VideoStreaming-42]</b> The application must have functionality for account management				
Section	<b>1.7 User characteristics</b>				
Information	<b>1.7.1 Average user</b> <b>[VideoStreaming-32]</b> <ul style="list-style-type: none"> <li>• age between 18 and 40</li> <li>• male</li> <li>• no specific nationality</li> <li>• has prior experience with similar applications</li> </ul>				
Information	<b>1.7.2 Underaged user</b> <b>[VideoStreaming-33]</b> With the parents consent it is possible for underaged persons to use the application				
Information	<b>1.7.3 User with disabilities</b> <b>[VideoStreaming-34]</b> Users may have disabilities like the following: <ul style="list-style-type: none"> <li>• color blindness</li> <li>• bad eyesight or complete blindness</li> <li>• deafness</li> </ul>				
Section	<b>1.8 Limitations</b>				
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Section	<b>1.9 Acronyms and abbreviations</b>				
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	<b>[VideoStreaming-86]</b> Progressive web application				
Information	<b>1.9.2 MPAA</b> <b>[VideoStreaming-81]</b> Motion Picture Association				
Information	<b>1.9.3 NIST</b> <b>[VideoStreaming-82]</b> National Institute of Standards and Technology				
Information	<b>1.9.4 GDPR</b> <b>[VideoStreaming-96]</b> General Data Protection Regulation				
Section	<b>2. Requirements</b>				
Section	<b>2.1 Functions</b>				
Functional Requirement	<b>2.1.1 User registration</b> <b>[VideoStreaming-47]</b> The application must have a form with which a user can create an account.  This formula must have inputs for: <ul style="list-style-type: none"> <li>• Email address</li> <li>• Password (must fulfill most recent NIST recommendations)</li> <li>• Repeat password</li> <li>• Membership type</li> <li>• Payment option ( either Paypal or Debit card)</li> </ul>		High	Test	Threshold
Functional Requirement	<b>2.1.1.1 Multiple Membership types</b> <b>[VideoStreaming-99]</b> At time of launch users may decide between two different membership types that will decide upon the extent of		Low	Inspection	Performance

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	<p>the functionality they will have access to:</p> <ul style="list-style-type: none"> <li>• Normal (5\$/month)</li> <li>• Premium (15\$/month)</li> </ul>				
Functional Requirement	<p><b>2.1.1.2 Successful registration</b></p> <p><b>[VideoStreaming-79]</b> On successful registration the user will receive an email to verify and activate his account after which he will be redirected to the login page</p>		High	Test	Threshold
Functional Requirement	<p><b>2.1.1.3 Unsuccessful registration</b></p> <p><b>[VideoStreaming-80]</b> On unsuccessful registration one or more error message(s) will be displayed detailing what went wrong (e.g. password doesn't meet security standards)</p>		High	Test	Threshold
Functional Requirement	<p><b>2.1.2 Login</b></p> <p><b>[VideoStreaming-48]</b> The application must have a form with which the user can log into his account.</p> <p>Must have inputs for:</p> <ul style="list-style-type: none"> <li>• Email address (identification)</li> <li>• password (authentication)</li> <li>• "Remember me" checkbox (only for the PWA)</li> </ul>		High	Test	Threshold
Functional Requirement	<p><b>2.1.2.1 Successful login</b></p> <p><b>[VideoStreaming-83]</b> On successful login the user will be able to select the profile after which he will be redirected to the startscreen of the application</p>		High	Test	Threshold
Functional Requirement	<p><b>2.1.2.2 Unsuccessful login</b></p> <p><b>[VideoStreaming-84]</b> On an unsuccessful login attempt an error message will be displayed</p>		High	Test	Threshold



<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	and the password input will be cleared				
Functional Requirement	<b>2.1.2.3 Forgot password</b> <b>[VideoStreaming-85]</b> It must be possible to reset the password for an account by requesting an email		High	Test	Threshold
Functional Requirement	<b>2.1.3 Account management</b> <b>[VideoStreaming-68]</b> The application must have functionality for account management		High	Test	Threshold
Functional Requirement	<b>2.1.3.1 Number of profiles</b> <b>[VideoStreaming-67]</b> Normal users can have up to 4 different profiles per account of which 2 may use the application simultaneously.  Premium users can have up to 8 different profiles per account of which 6 may use the application simultaneously.		High	Test	Performance
Functional Requirement	<b>2.1.3.2 Admin profile</b> <b>[VideoStreaming-70]</b> Profiles can be declared admins for the account granting them several administrative rights (see following requirements)		High	Test	Threshold
Functional Requirement	<b>2.1.3.3 Create profiles</b> <b>[VideoStreaming-71]</b> Admin profiles can create new profiles as long as the maximum number for their membership plan is not exceeded		High	Test	Threshold

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
Functional Requirement	<b>2.1.3.4 Delete profiles</b> [VideoStreaming-72] Admin profiles can delete other non-admin profiles		High	Test	Threshold
Functional Requirement	<b>2.1.3.5 Grant admin</b> [VideoStreaming-73] Admin profiles can grant admin status to other profiles		High	Test	Threshold
Functional Requirement	<b>2.1.3.6 Age restriction</b> [VideoStreaming-69] Admin profiles can enable and disable age restriction mode for profiles		Medium	Test	Threshold
Functional Requirement	<b>2.1.3.7 Deactivate account</b> [VideoStreaming-75] Admin users can deactivate the account making it impossible for any profile of the account to use the applications services		High	Test	Threshold
Non-func. Requirement	<b>2.1.3.8 Reactivate account</b> [VideoStreaming-104] The user should have a 30 day time period in which he can reactivate his account without having to go through the process of registering again		Medium	Test	Performance
Non-func. Requirement	<b>2.1.3.9 Delete account</b> [VideoStreaming-103] Deactivated accounts automatically have all their data deleted 30 days after deactivation or earlier should the user wish so		Medium	Test	Performance
Functional Requirement	<b>2.1.4 Startscreen</b> [VideoStreaming-78] The application must have a startscreen showing both profile-related and		High	Inspection	Threshold

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	non-profile-related recommendations				
Functional Requirement	<b>2.1.4.1 Current trends</b> <b>[VideoStreaming-88]</b> On the startscreen displayed will be the Top 10 most watched movies of the last week		Medium	Inspection	Performance
Functional Requirement	<b>2.1.4.2 Recommendations</b> <b>[VideoStreaming-89]</b> On the startscreen displayed should be recommendations for the user the are based on his search and watch history		Medium	Inspection	Performance
Functional Requirement	<b>2.1.4.3 History</b> <b>[VideoStreaming-90]</b> On the startscreen displayed will be both unfinished and recently watched movies		High	Inspection	Threshold
Functional Requirement	<b>2.1.5 Movie search</b> <b>[VideoStreaming-77]</b> It must be possible to serach for movies by their title		High	Test	Threshold
Functional Requirement	<b>2.1.5.1 Successful search</b> <b>[VideoStreaming-91]</b> On successful search the movie will be displayed with additional information (runtime, actors, regie, genres) and is able to be started with 1 additional click		High	Test	Threshold
Functional Requirement	<b>2.1.5.2 Unsuccessful search</b> <b>[VideoStreaming-92]</b> On unsuccessful search the user will be notified that the movie is not available		High	Test	Threshold

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
Functional Requirement	<b>2.1.5.3 Filter for Genre</b> <b>[VideoStreaming-121]</b> Movies must be categorized into different genres and it must be possible to filter for different genres		High	Test	Performance
Functional Requirement	<b>2.1.5.4 Search for actors</b> <b>[VideoStreaming-93]</b> It should be possible to search for actors which will return the 5 most popular movies starring that actor		Medium	Test	Performance
Functional Requirement	<b>2.1.6 Stream movies</b> <b>[VideoStreaming-94]</b> The application must allow a user to stream a movie while connected to the internet and having the necessary connection speed		High	Inspection	Threshold
Functional Requirement	<b>2.1.6.1 Change language and subtitle</b> <b>[VideoStreaming-100]</b> It must be possible to change the movies language and the subtitles language without having to pause the Film		High	Inspection	Threshold
Functional Requirement	<b>2.1.6.2 Remember time of pause</b> <b>[VideoStreaming-101]</b> The application must save the time at which a user stopped the movie even should the application be terminated		High	Test	Threshold
Functional Requirement	<b>2.1.7 Download movies</b> <b>[VideoStreaming-95]</b> It must be possible to download movies and save them so they can also be watched when no internet connection is available.		Medium	Inspection	Performance

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	(Only applicable to the downloadable app)				
Functional Requirement	<p><b>2.1.7.1 Number of downloadable movies</b></p> <p><b>[VideoStreaming-98]</b> Profiles belonging to a normal account may download two movies each.</p> <p>Profiles belonging to a premium account may download five movies each.</p>		Medium	Test	Performance
Non-func. Requirement	<p><b>2.1.7.2 Downloaded movies storage size</b></p> <p><b>[VideoStreaming-97]</b> In order to save storage space on the users device all downloaded movies are only available in FullHD</p>		Medium	Inspection	Performance
Functional Requirement	<p><b>2.1.8 Rate movies</b></p> <p><b>[VideoStreaming-102]</b> It should be possible to rate movies on a scale From 1 to 5 (half points are possible)</p>		Low	Inspection	Excitement
Functional Requirement	<p><b>2.1.9 Advertising</b></p> <p><b>[VideoStreaming-112]</b> The application may display advertisement for users with a normal account</p>		Medium	Inspection	Reverse
Non-func. Requirement	<p><b>2.1.9.1 Targeted advertising</b></p> <p><b>[VideoStreaming-119]</b> When using the web based application the application must show a Cookie banner upon login.</p> <p>The application may use optional Cookies for targeted advertisement</p>		Medium	Inspection	Reverse

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	should the user not prohibit the usage				
Functional Requirement	<b>2.1.10 Localization</b> <b>[VideoStreaming-117]</b> The application may use information like ip-address, connection informations and additional information from internet service providers to roughly localize the user		High	Test	Indifferent
Non-func. Requirement	<b>2.1.10.1 Measures against VPNs</b> <b>[VideoStreaming-118]</b> The application may take action against the usage of VPNs (e.g. banning IP-Addresses of known VPN-Servers) in order to bypass the ban on movies in their country		Medium	Test	Reverse
Section	<b>2.2 Usability requirements</b>				
Functional Requirement	<b>2.2.1 Application language(s)</b> <b>[VideoStreaming-58]</b> The application must support all of the following languages: <ul style="list-style-type: none"> <li>• English</li> <li>• French</li> <li>• Spanish</li> <li>• Portuguese</li> <li>• German</li> <li>• Italian</li> <li>• Chinese</li> <li>• Japanese</li> <li>• Korean</li> <li>• Arabic</li> </ul>		High	Inspection	Threshold
Functional Requirement	<b>2.2.2 Movie language(s)</b> <b>[VideoStreaming-59]</b> Every movie must be available in its original language and if existing dubbed in: <ul style="list-style-type: none"> <li>• English</li> </ul>		High	Inspection	Threshold

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	<ul style="list-style-type: none"> <li>• French</li> <li>• Spanish</li> <li>• German</li> <li>• Chinese</li> <li>• Japanese</li> </ul> <p>Additionally every movie must have subtitles for all supported application languages</p>				
Functional Requirement	<b>2.2.3 Standard resolution</b> <b>[VideoStreaming-56]</b> Every movie must be available in FullHD for all users		High	Inspection	Threshold
Functional Requirement	<b>2.2.3.1 Additional resolution</b> <b>[VideoStreaming-57]</b> For premium members every movie must also be available in 2K, QHD and 4K		Low	Inspection	Excitement
Functional Requirement	<b>2.2.4 Accessibility</b> <b>[VideoStreaming-60]</b> For users with disabilities the application should support color blind mode and text reader		Medium	Inspection	Performance
Functional Requirement	<b>2.2.4.1 Healthcare warnings</b> <b>[VideoStreaming-110]</b> The application must have healthcare warnings for at least these possible problems: <ul style="list-style-type: none"> <li>• Movies that feature rapidly blinking lights that might lead to epileptic seizures must have a warning</li> <li>• After an uninterrupted use of 6 hours the application must show a warning that excessive use may be bad for eyesight</li> </ul>		Medium	Inspection	Indifferent
Non-func. Requirement	<b>2.2.5 Energy saving</b>		Low	Test	Excitement

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	<p><b>[VideoStreaming-111]</b> The user may enable eye-tracking using their devices camera.</p> <p>Should the application notice that the user isn't focusing on the screen for more than 15 seconds the movie will automatically pause, allowing the users enrgy saving settings to possibly send the device into sleep mode</p>				
Functional Requirement	<p><b>2.2.6 Age restriction mode</b></p> <p><b>[VideoStreaming-74]</b> The application must support an age restricted mode based on the MPAA film rating system that can be activated to restrict access to age restricted movies</p>		High	Inspection	Threshold
Non-func. Requirement	<p><b>2.2.7 Collecting Data</b></p> <p><b>[VideoStreaming-120]</b> The application must collect these types of data at least:</p> <ul style="list-style-type: none"> <li>• usage information</li> <li>• device information</li> </ul>		High	Test	Threshold
Section	<b>2.3 Performance requirements</b>				
Non-func. Requirement	<p><b>2.3.1 Number of users</b></p> <p><b>[VideoStreaming-61]</b> At time of launch the application must be able to support 1 million users simultaneously</p>		High	Analysis	Threshold
Non-func. Requirement	<p><b>2.3.2 Available movies</b></p> <p><b>[VideoStreaming-62]</b> Every movie that ran in cinemas must be available 100 days after their</p>		High	Inspection	Threshold



<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	theatrical release and will then be available for exactly 2 years				
Non-func. Requirement	<b>2.3.3 Connection speed</b> <b>[VideoStreaming-63]</b> While streaming a connection speed of 10 Mbps must be enough for the movie to run in FullHD without lagging		High	Analysis	Threshold
Non-func. Requirement	<b>2.3.4 Process time</b> <b>[VideoStreaming-76]</b> 90% of transactions (e.g. login, movie search) must be completed in under 1 second		High	Analysis	Threshold
Section	<b>2.4 Logical database requirements</b>				
Non-func. Requirement	<b>2.4.1 Account data</b> <b>[VideoStreaming-64]</b> Account data consists of: <ul style="list-style-type: none"> <li>• email</li> <li>• membership type</li> <li>• payment information</li> <li>• number of profiles for this account</li> <li>• references to the profile data for this account</li> </ul> Additionally it has to be encrypted before being stored in the database		High	Analysis	Indifferent
Non-func. Requirement	<b>2.4.2 Profile data</b> <b>[VideoStreaming-65]</b> Profile data consists of: <ul style="list-style-type: none"> <li>• application language</li> <li>• default movie language</li> <li>• top search result of the last 25 searches</li> <li>• watch history (last 10 watched movies including</li> </ul>		High	Analysis	Indifferent

<i>Type</i>	<i>Description</i>	<i>Source</i>	<i>Priority</i>	<i>Ver. Method</i>	<i>Kano-Model Category</i>
	<p>at which point the movie was stopped)</p> <ul style="list-style-type: none"> <li>• age restriction mode</li> </ul>				
Non-func. Requirement	<p><b>2.4.3 Movie data</b></p> <p><b>[VideoStreaming-113]</b> Movie data consists of:</p> <ul style="list-style-type: none"> <li>• video data in different resolutions</li> <li>• audio data for different languages</li> <li>• subtitles in different languages</li> </ul>		High	Analysis	Indifferent
Section	<b>2.5 Design constraints</b>				
Non-func. Requirement	<p><b>2.5.1 Styling</b></p> <p><b>[VideoStreaming-49]</b> The styleguide for HMI must at all times be observed</p>		High	Inspection	Indifferent
Section	<b>2.6 Standards compliance</b>				
Non-func. Requirement	<p><b>2.6.1 GDPR</b></p> <p><b>[VideoStreaming-53]</b> In compliance with the GDPR will all user data of users living in the EU also be stored there</p>		High	Analysis	Threshold
Non-func. Requirement	<p><b>2.6.2 Banned movies</b></p> <p><b>[VideoStreaming-114]</b> If a movie is banned in a country it must not be possible for users connecting to the service from that country to get access to that movie</p>		High	Analysis	Threshold
Section	<b>2.7 Software system attributes</b>				
Non-func. Requirement	<p><b>2.7.1 Reliability</b></p> <p><b>[VideoStreaming-50]</b> The application must run without crashing in 95% of its uses</p>		High	Analysis	Threshold

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Non-func. Requirement	<b>2.7.2 Availability</b> <b>[VideoStreaming-51]</b> The application must be available at all times and in every country except the following: <ul style="list-style-type: none"> <li>• North Korea</li> <li>• Russia</li> </ul>		High	Analysis	Threshold
Non-func. Requirement	<b>2.7.3 Security</b> <b>[VideoStreaming-52]</b> <ul style="list-style-type: none"> <li>• Personal data is to be encrypted using the Advanced Encryption Standard (AES)</li> </ul>		High	Analysis	Threshold
Non-func. Requirement	<b>2.7.4 Portability</b> <b>[VideoStreaming-55]</b> The Application must be available from: <ul style="list-style-type: none"> <li>• Google Play Store</li> <li>• App Store</li> </ul> <p>The Application must be runnable on the last 3 major version of each of these operating systems:</p> <ul style="list-style-type: none"> <li>• Windows</li> <li>• macOS</li> <li>• Android</li> <li>• iOS</li> <li>• iPadOS</li> </ul> <p>The web based application must be functional with the last 5 versions of these browsers:</p> <ul style="list-style-type: none"> <li>• Chrome</li> <li>• Safari</li> <li>• Firefox</li> <li>• Edge</li> </ul>		High	Inspection	Threshold
Non-func. Requirement	<b>2.7.5 Scalability</b> <b>[VideoStreaming-115]</b> The application must be scalable to support both a larger number of		High	Analysis	Indifferent

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	users and a larger number of movies than anticipated at launch without having to refactor more than 10% of the source code				